

WHAT IS CLAIMED IS:

1. A filtration media for drinking water comprising:
metal oxide nanocrystals; and
a polymeric binder.
2. The filtration media of claim 1, further comprising activated carbon.
3. The filtration media of claim 1, wherein the nanocrystals are present in an amount ranging from about 0.1 to about 10 wt%, based upon the total weight of the filtration media.
4. The filtration media of claim 1, wherein the metal oxide is selected from the group consisting of titanium oxide, zinc oxide, and mixtures thereof.
5. The filtration media of claim 1, further comprising zirconia.
6. The filtration media of claim 1, wherein the nanocrystals have an average particle size ranging from about 20 nm to about 1000 nm.
7. The filtration media of claim 1, wherein the polymeric binder is selected from the group consisting of high-density polyethylene and low-density polyethylene.
8. The filtration media of claim 7, wherein the polymeric binder is high-density polyethylene.
9. A filtration media in the form of a block, comprising:
nanocrystals of zinc oxide or titanium oxide or a mixture thereof in an amount of about 0.5 wt%, based on the total weight of the filtration media;
activated carbon;
a polymeric binder.

10. The filtration media of claim 9, wherein the filtration media is capable of removing from water bacteria having an average size of about 0.1 micron.
11. The filtration media of claim 9, wherein at least a portion of the activated carbon is present as powder having an average particle size of approximately 50-100 microns.
12. The filtration media of claim 11, wherein the nanocrystals comprise titanium oxide.
13. The filtration media of claim 12, wherein the polymeric binder comprises about 20% high-density polyethylene.
14. The filtration media of claim 9, wherein the nanocrystals, activated carbon, and polymeric binder were mixed by shearing, and wherein the weight ratio of nanocrystals to polymeric binder ranged between about 30:1 and about 5:1.
15. The filtration media of claim 14, wherein the weight ratio of nanocrystals to polymeric binder ranged between about 20:1 and about 10:1